

couple the output terminal to a voltage source to determine the third preselected voltage level different than the second preselected voltage level.

The present action advanced essentially the same grounds of rejection as the prior office action mailed August 2, 1999, relying on the doctrine, discussed in MPEP 2114, that functional limitations do not distinguish structurally in apparatus claims.

“Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. In re Danly, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). “[A]pparatus claims cover what a device is, not what a device ‘does.’” (emphasis in original) Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990).” MPEP 2114

Claim 1 makes clear that the claimed apparatus is “coupled to receive binary signals” and “coupled to deliver binary signals”. Claims 8 and 13 recite limitations of a similar nature. The present office action asserts that these limitations merely recite the type of signals received and output by the device (see page 3 of office action) and are therefor merely intended use restrictions which cannot patentably distinguish over the prior art.

“A claim containing a ‘recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus’ if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987)” MPEP 2114

Applicant disagrees that the limitations merely recite the type of signals received and output by the device, or the intended use. Surely the Examiner agrees that couplings in a circuit contribute to the structure of the circuit. A device “coupled to receive a binary signal” is structurally part of, e.g. coupled to, a larger circuit which supplies the binary signal. Further, a device “coupled to deliver binary signals” is structurally part of, e.g.

coupled to, a larger circuit which receives the binary signal. These are structural, not functional, limitations. Physical couplings to a circuit (as opposed to mere recitation of the signals which may be received or delivered by a circuit) do not recite intended use; they contribute structure. Further, the claims as amended recite the output terminal of the transistor coupled to a voltage source which determines the third (output) voltage level to a level different than the second (input) voltage level. Again, such couplings are structural and not functional.

Applicant would also like to point out that MPEP 2114 cannot form the basis of rejecting process claims (for example claim 15), although the office action appears to apply it for that purpose.

Respectfully, Applicant asserts that the present office action's implication that an analog RC attenuator circuit is "structurally equivalent" to the claimed invention is erroneous and should be withdrawn. The office action asserts that because a transistor can function as a resistor in some circumstances, the claimed invention is rendered structurally equivalent to an RC attenuator. Essentially this argument may be summarized as "component A (the transistor) could function as component B (the resistor), therefore component A is structurally equivalent to component B". Just because one component may, in some circumstances, function like another does not render the two components structurally equivalent. The structure of a transistor is very different from that of a resistor; for example, the transistor includes one or more capacitors which the resistor

does not. Furthermore, Applicant has pointed out in the claims and in prior responses that these structural differences which contribute to the claimed invention:

“...the transistor has characteristics which the resistor does not. It is these characteristics (e.g. a pumping action of the transistor’s parasitic capacitance...) which helps enable the circuit’s level-shifting function...”

The claims also clearly recite the structural differences over a resistor:

“...the resistive element cooperating with a parasitic capacitor defined by said transistor to increase the voltage applied to the enable terminal...”

Furthermore, no “inherent function” can be presumed because the claimed invention is clearly structurally distinct from the RC attenuators taught by the cited prior art.

“Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). ‘When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.’ *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the *prima facie* case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product.” MPEP 2112.01

Applicant has clearly shown that resistors do not necessarily possess the characteristics of transistors. It is also well known that resistors are produced by different processes than are transistors.

Furthermore, the prior art RC attenuators do not anticipate the claimed method (e.g. claim 15) because resistors do not demonstrate charge pumping during normal operation, and further, the prior art RC attenuators are not coupled to receive and deliver binary signals.



"Under the principles of inherency, if a prior art device, in its normal and usual operation, would necessarily perform the method claimed, then the method claimed will be considered to be anticipated by the prior art device. When the prior art device is the same as a device described in the specification for carrying out the claimed method, it can be assumed the device will inherently perform the claimed process. *In re King*, 801F.2d 1324, 231 USPQ 136 (Fed. Cir. 1986)" MPEP 2112.02

Assuming, arguendo, that the claimed structure is anticipated by the prior art, the process claims (e.g. claim 15) may still be patentable if they recite a new and unobvious use.

"The discovery of a new use for an old structure based on unknown properties of the structure might be patentable to the discoverer as a process of using. *In re Hack*, 245 F.2d 246, 248, 114 USPQ 161, 163 (CCPA 1957)." MPEP 2112.02

If the Examiner believes that a telephone conference would be beneficial to advance this case toward allowance, he is strongly encouraged to telephone the undersigned at the number provided below.

Applicant, for the reasons above, believes the rejections of the claims should be withdrawn. Allowance of all claims is respectfully requested.

Respectfully submitted,

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